

Saskatchewan Housing Needs Study: Detailed Terms of Reference

1977

The Institute of Urban Studies





THE UNIVERSITY OF
WINNIPEG

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SASKATCHEWAN HOUSING NEEDS STUDY: DETAILED TERMS OF REFERENCE

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The Institute of Urban Studies is an independent research arm of the University of Winnipeg. Since 1969, the IUS has been both an academic and an applied research centre, committed to examining urban development issues in a broad, non-partisan manner. The Institute examines inner city, environmental, Aboriginal and community development issues. In addition to its ongoing involvement in research, IUS brings in visiting scholars, hosts workshops, seminars and conferences, and acts in partnership with other organizations in the community to effect positive change.

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SASKATCHEWAN HOUSING NEEDS STUDY

Detailed terms of reference
prepared by

Institute of Urban Studies
University of Winnipeg

November 18, 1977



THE UNIVERSITY OF WINNIPEG

WINNIPEG, CANADA

R3B 2E9

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November 17 1977

Ms. Christine Rump
Saskatchewan Region Office
Central Mortgage and Housing Corporation
P.O. Box 380
Regina, Saskatchewan S4P 3A2

Dear Christine:

Re: CR File Number 159-2/77-19

On behalf of the Institute of Urban Studies, I am pleased to enclose our detailed terms of reference in connection with the Saskatchewan Housing Needs Study. In framing our submission we have attempted to carefully follow the guidelines set out in your letter of October 25, 1977, and attached terms of reference. However, if you have any questions regarding our submission, please do not hesitate to call me at the above number.

Yours sincerely,

Christine McKee
Assistant Director

CMcK/NC

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SECTION 1
CONTENT AND PURPOSE

SECTION I

STUDY CONTENT AND PURPOSE

1-1 PROBLEM DEFINITION

One of the basic objectives in developing housing policy must be to plan for sufficient dwellings of appropriate size, type, quality and tenure to be available in the specific geographical areas where they are needed. The development of an adequate housing policy requires accurate, comprehensive data. A fundamental problem facing both the C.M.H.C. Saskatchewan Regional Office and the Saskatchewan Housing Corporation is the lack of an adequate data base to:

- i) plan the distribution of capital expenditure within the province
- ii) prioritize housing needs by area and by program, and
- iii) develop new policies and programs.

Housing need is associated with adequacy, availability and affordability. What is needed to assist C.M.H.C. and S.H.C. to frame policy directions, to guide housing activity in the public, private and third sectors of housing in Saskatchewan is a detailed, micro-level analysis to provide precise information about the character of the present housing stock and socio-economic data on population, household formation, household size, income levels and migration. With such information, an assessment can be made of the extent to which the supply of housing is adequate to meet present and future needs, and the extent to which any imbalance can be redressed by policy initiatives such as new building, capital investment, rehabilitation, conservation, direct housing allowance transfers, selective versus blanket policies, etc.

1-2 STATEMENT OF OBJECTIVES

The purpose of the proposed study is therefore to develop a computerized information base consisting of a detailed analysis of the housing stock, and the socio-economic characteristics of the households which will identify specific housing needs and assist C.M.H.C. Regional Office, Saskatchewan, and Saskatchewan Housing Corporation to project future needs and develop policy options.

The specific objectives of the study would be as follows:

- i) To prepare a computerized data base.
- ii) To develop and test a flexible package of computer programs to provide for:
 - data storage inputting and extraction;
 - annual updating of the data base.
- iii) To prepare a methodology and computer program to allow for projections of key variables.
- iv) To prepare a comprehensive user's handbook relating to parts (ii) and (iii) above.

1-3 PROPOSAL

It is proposed that the Institute of Urban Studies undertake the Saskatchewan Housing Needs Study using a special core study group of two full time members and three part time members, which would be directed from the Institute's office at the University of Winnipeg. It is envisaged that a field survey planned for the summer of 1978 would supplement this core group and would involve approximately 20 Saskatchewan summer students. A field office would be established in Regina during the summer period of data collection. The I.U.S. core study group would work in close co-operation with the Regional Co-Ordinating Committee and key members would meet on a regular basis.

The capability of the Institute to undertake the Housing Needs Study was discussed in our preliminary proposal. In addition to the factors discussed there, which include the Institute's focus on housing research, its familiarity with Saskatchewan through its NIP and RRAP program evaluations and the skills of its research staff, there are several factors that I.U.S. can offer which are of special value in conducting and supervising a project of this nature. First, as was mentioned in the original submission, I.U.S. has low-cost access to the University of Winnipeg's computer facilities for analysis, testing, and initial storage of data. Second, the Institute could offer to provide service during the two years following the preparation of the data base to assist Corporation Staff to update the data base. Third, the Institute is an established non-profit organization which can guarantee a long-term commitment to the project.

SECTION II

COMPILATION OF DATA-BASE

SECTION II

COMPILATION OF DATA BASE

A prerequisite in the emergence of any systematic information base is the development of a means of describing and classifying the phenomena in question. This section will attempt to undertake this task.

2-1 DEFINITION AND SCOPE OF STUDY AREA

The geographical area of study is defined as the Province of Saskatchewan excepting the area under the jurisdiction of the Department of Northern Saskatchewan. The study area will therefore include most of the area south of latitude 54° N.

1971 and preliminary 1976 census figures for all of Saskatchewan show the following:

<u>Total Saskatchewan - Census Data</u>		
	<u>1971 (rounded)</u>	<u>1976 (preliminary)</u>
Total population	926,000	907,000
Total households	268,000	266,800 (IUS estimate)
Total occupied dwellings	268,000	
Total families	215,000	

Based on a more detailed review of population distribution, the study area, as defined above, would exclude approximately 20,000 people or approximately 6,000 households yielding the following totals:

Estimated study area population in 1976 - 887,000

Estimated study area households in 1976 - 261,000

2-2 GEOGRAPHICAL BASIS FOR DATA COLLECTION

It is suggested that the Census Canada standard geographical classification system be used as the geographical basis for data collection and aggregation. This classification system consists of a set of geographical units, usually municipalities, each identified by a unique code number which reflects municipal boundaries. The system was set up to make available a standard set of geographical units which are used through Statistics Canada. When used elsewhere, such as in this study, comparison of statistics for particular areas will be facilitated. In the collection of non-census data, attempts will be made to collect and aggregate data, as much as is possible, using this standard classification system.

In Saskatchewan, the numbers of geographical areas are as follows:

Geographical Classification System

Saskatchewan

		<u>Numbers</u>
Census Divisions		18
Census Subdivisions	Approximately	320
C.M.A. Census Metropolitan Areas		2
Regina - Census Tracts		28
Saskatoon - Census Tracts		22
Cities		8
Towns		130
Villages	Approximately	360
Indian Reserves and Other		20
Approximate Total Census Units		<u>908</u>

The above 908 census units will represent the general working level of the census data.¹ Data down to the more detailed geographical unit of enumeration area may be included as considered appropriate in key areas.

The Saskatchewan assessment data exists to a much greater level of detail. Assuming that the total number of assessment records roughly equals the total number of households, there are an estimated 261,000 residential assessment records in the study area. These records are organized by block and lot and can be aggregated to match the Census Geographical System as outlined previously. A detailed discussion of data sources and estimated costs associated with data compilation follows in the remainder of the submission.

1. Vide Appendix A. It reproduces two maps of Saskatchewan that illustrate these census units.

2-3 IDENTIFICATION OF VARIABLES

The data base will have the following components:

- i) socio-economic data
- ii) housing stock data
- iii) access to housing data

The accompanying Data Source/Variable Matrix is self explanatory.

It charts out the preliminary list of variables to be included in the data base against known or likely data sources. Comments in the body of the matrix reflect varying levels of knowledge on availability, context, format, level of detail, possible updating sources, etc. for each variable. This matrix is a dynamic one, expanding and changing as our knowledge and familiarity with the data increases.

One of the first tasks of the study group will be finalizing the matrix. This will be done in discussion with the Regional Co-ordinating Committee and will involve agreements regarding exactly what variables will be collected and from whom. A final selection of variables will require a review of major policy issues that are of concern to C.M.H.C. and S.H.C. Only through such a discussion of required variables and their relationship to desired policy outcomes can final decisions on data input be made.

Establishing the co-operation of the various government and non-government agencies which can provide data requirements is of critical importance. Successful completion of the data base and consequently this study, is dependent on receiving this co-operation, and, as such, the Institute's ability to meet the terms of reference herein set out are made conditional on establishing satisfactory working relationships.

DATA SOURCES - PRIMARY INPUT

1

VARIABLES	DATA SOURCES - PRIMARY INPUT								
A. SOCIO-ECONOMIC	STATISTICS CANADA 1976 Census	Other	PROVINCIAL GOVERNMENT Municipal Affairs	S. H. S. P.	Other	Federal Government	Municipal Government	Other General Sources	Special Survey
1. Population - totals - age group - sex	down to enumeration areas	Possible update source: Annual survey: 1. Estimated pop. by sex, age group		Annual source: pop. count in- cludes most people in province good approx. by census areas by age and sex.			Possible source for Regina <u>Regina Housing Needs Study</u> (all variables)	Election enumeration data. Possible source but reliability problems	
2. Households - totals - size - type - composition - head of h/h	"	"		could be derived from check on address but time consuming					
3. Families - total - size - type - composition	"	"		Indicates family structure by head, spouse and never married children under 18					
4. Income - household - family - male - female - farm/non-farm		Possible primary source: Annual surveys: 1. <u>Survey of consumer finances</u> 2. <u>Annual farm in- come survey</u>				Revenue Canada possible source (confidentiality problems)			
5. Populations with special needs.	census - singles - students - large families		possible source re: dwelling units with special features for the handicapped	- elderly - disabled - handicapped	S. H. C. - elderly, numbers and distribution		may have elderly information		
6. Crowding			persons per floor area						
7. Migration - inter & intra provincial - urban/rural - length of occupancy	census - limited source			possible source of annual update: - good indication of migration into province - poor indication of migration out of province		Department of Manpower - possible labour migration source			migration data may require special survey

VARIABLES	DATA SOURCES - PRIMARY INPUT								
B. HOUSING STOCK	STATISTICS CANADA 1976 Census	Other	PROVINCIAL GOVERNMENT Municipal Affairs	S. H. S. P.	Other	Federal Government	Municipal Government	Other General Sources	Special Survey
1. Total number of dwelling units	down to enumeration area		<u>Assessment Data</u> assessed units by block & lot. aggre- gated to census geographical areas				Possible source for Regina, Regina <u>Housing Needs</u> Study (all variables)		
2. Tenure	" owned v. rented	possible update source: annual survey <u>Household</u> <u>Facilities and</u> <u>Equipment</u>				C, M, H. C. source for third sector information			
3. Structure Types	"		by block and lot						
4. Age of dwelling units			by block and lot						
5. Size of dwelling units - square feet - number of rooms			by block and lot - estimates may be necessary for apartment units						
6. Facilities - utilities & services - physical - garages - bath, toilet etc. - luxury indicators		possible update source: annual survey <u>Household Facilities</u> <u>and Equipment</u>	by block and lot as available		Provincial utility agencies		Municipal utility agencies		
7. Condition of stock - quality of original construction - current condition			- 6 category classi- fication % net depreciation (personal interpre- tation may be involved)				Possible municipal housing condition surveys		special condition survey supplement may be required

VARIABLES

DATA SOURCES - PRIMARY INPUT

3

cont'd B. HOUSING STOCK	STATISTICS CANADA		PROVINCIAL GOVERNMENT			Federal Government	Municipal Government	Other General Sources	Special Survey
	1976 Census	Other	Municipal Affairs	S. H. S. P.	Other				
8. New Construction (types and tenure)						C. M. H. C. possible update for #1 and 2 - annual starts - third sector source	possible update for #1 and 2 - building-permits - occupancy permits issued		
9. Conversions (types and tenure)					Provincial condominium conversion records	C. M. H. C. tenure conversion (co-op) information	possible update for #1 and 2 - physical conversion		
10. Demolitions, closures etc.							possible update for #1 and 2 - permits issued - code enforcement closures		
11. Planned Construction (types and tenures)					Provincial development approvals granted not built		Municipal Government approvals granted not built		
12. Planned Rehabilitations					R. R. A. P. - NIP information		Municipal improvement programs		
13. Assessed Value - land - building			by block and lot						
14. Date of last assessment			by block and lot						
15. Vacancy/Occupancy	census - Occupied dwellings					C. M. H. C. vacancy rates			

VARIABLES

DATA SOURCES - PRIMARY INPUT

4

C. ACCESS TO HOUSING	STATISTICS CANADA		PROVINCIAL GOVERNMENT			Federal Government	Municipal Government	Other General Sources	Special Survey
	1976 Census	Other	Municipal Affairs	S.H.S.P.	Other				
1. House Prices					Department of Industry & Commerce Community Profiles 1976		Possible source for Regina <u>Regina Housing Needs Study</u> (all variables)	Real Estate Board & Agents housing prices by type	Special survey may be necessary
2. Rent Levels					- Community Profiles as above - S.H.C. public housing rent levels by dwelling unit type			Real Estate Board - private stock rent levels by type	Special survey may be necessary
3. Mortgage - rates - availability						C.M.H.C.		Provincial lending agencies	
4. Rent Allowances					S.H.C.	C.M.H.C.			
5. Income Supplements					S.H.C.	C.M.H.C.			
6. Employment	Census - activity in labour market					Manpower			

Our preliminary contacts with primary data sources (see Appendix C) have been positive and we do not anticipate any serious problems. However, it should also be stressed that the development and maintenance of an information base for policy purposes depends on the co-operation of government departments and must involve liaisons of a long term nature which must be maintained after the consultant's work is over. For this reason, it is strongly recommended that C.M.H.C. and S.H.C. be closely involved with the consultant in arranging and facilitating co-operation with data source agencies.

2-4 PRIMARY DATA SOURCES AND METHODOLOGY FOR DATA COLLECTION

2-4-1 Assessment Data - Department of Municipal Affairs

The assessment data currently held by the Department of Municipal Affairs will be one of the most important and the most expensive sources of data to collect. For this reason, a detailed discussion and costing of this source is included.

The actual assessment data components to be collected will relate directly to most of the housing stock variables as listed in the B. Housing Stock section of the data matrix. IUS has estimated, for 1976, a total of approximately 261,000 households in the study area. Obtaining assessment data for each of these would result in 261,000 records. These records would be encoded on to computer coding sheets and key punched from these. A coding manual will be prepared for use in the coding process. The manual will be based on a complete review of the assessment data content and format. For estimating purposes several assumptions are made:

- i) the data to be computerized will require approximately 40 character columns of information per record.
- ii) with the use of the coding manual, data records can be coded at the rate of 25 per hour per person.
- iii) the total number of records to be coded will be approximately 261,000 (as per IUS household estimate).

Based on these assumptions, the cost of coding, excluding professional staff salaries would be:

	\$
1. Man hours for coding 261,000 records at 25 per hour - approximately 10,500 @ \$5.00/hour	52,500
2. Hiring and staff costs	1,800
3. Field Manager Travel	1,500
4. Field Office Overheads	2,000
TOTAL costs of coding	<u>57,800</u>

An estimate supplied on short notice by a local firm estimated the cost of verified keypunching of 261,000 records at 40 columns each at \$22,000.

Cost of Verified keypunching	<u>22,000</u>
TOTAL	79,800
Plus 10% contingency (included in case assessment record processing assumptions are unrealistic)	<u>8,000</u>
TOTAL cost of preparing assessment data for computer input	\$87,800

2-4-2 Statistics Canada - Census Data

The second major source of data relating to most of the socio-economic variables included in the A. Socio-economic section of the data matrix will be the 1976 Census data. All of the data is available from Statistics Canada in the form of computer tapes and, as such, can be directly inputted into the Saskatchewan data base. Insofar as confidentiality constraints permit, Statistics Canada will produce for users, at cost, special computer tabulations. Cost estimates will be provided by Stats Canada upon submission of the tabulation specifications.

Availability of the census data in this form is very beneficial to the Saskatchewan data base. Preliminary discussions indicate that our census data requirements can be met quickly and at reasonable cost. However, final costs would be dependent on the actual Stats Canada charges after specific detailed census requirements are defined. Requirements with respect to key variables would be dependent on the outcome of the policy and variable discussions with the Regional Co-ordinating Committee in finalizing the data matrix.

It is proposed that tapes be purchased for both 1971 and 1976. The 1976 census was not a full census and, as such, the information available will be limited.

Those variables about which information was collected in 1976 are:²

- i) Population - sex
 - age
 - marital status

2. 1976 Census of Canada Form A and Form B questionnaire.

- ii) Household & structure
- iii) Families & structure
- iv) Tenure (ownership vs. rented)
- v) Dwelling types
- vi) Education
- vii) Activity in labour market

Current sources for other socio-economic variables such as income, migration and crowding will have to be found elsewhere. Possible sources are indicated on the variable matrix, however, research into availability, reliability and comparability for these other sources will be required.

For the purpose of this submission the estimated cost of acquiring and inputting the census data is: \$2,000.

2-4-3 Saskatchewan Hospital Services Plan

Saskatchewan Hospital Services Plan collects information on a Master Registration File which is a registry of health services beneficiaries and not, strictly speaking, a count of the Saskatchewan population. However, since the majority of people in the province are beneficiaries, the file is a good indication of the current population figures. As it is updated weekly and given a review every year, the data available could be a useful component of the study.

Although medical records are recorded, the information which would be useful to the study is the population figures which are broken down by both age and sex, by city, town and village and published in an annual report of the SHSP covered population. This could be a reasonable updating source for some of the basic socio-economic variables. Also, family structure indicating head, spouse and never married children under 18 years can be obtained from an analysis of the registration numbers.

The project sponsors are interested in identifying their client groups throughout the province. This data source could be used to identify the number of potential users of senior citizens housing. An analysis of hospital records could possibly be used to identify the number of handicapped people in the province if permission were granted to see those records.

However, given the nature of its file, the agency is concerned about confidentiality and access to the data is limited to those persons who obtain permission from the Executive Director of SHSP. The file contains about 1 million records which are on five reels of tape. Once permission is granted, the information is transcribed by the SHSP staff onto tape provided by the requesting agency. SHSP has not provided any analysis although their staff is available for consultation.

2-4-4 Other Data Sources

In addition to the three major data sources already discussed, other potential data sources have been identified. These sources are included in the matrix and following is a brief discussion, as far as our preliminary investigations have taken us.

The Saskatchewan Department of Industry and Commerce produced a series of Community Profiles for 1976, for 119 Cities, Towns, and Villages in Saskatchewan. These profiles include information on population, age groups, labour force, housing starts, average purchase price of houses, average price per lot, average rents and employment opportunities. It is our understanding that much of the information presented in these profiles was collected through direct communication with town officials and that annual updating is not planned.

In order to compile comprehensive access to housing data to complement existing data sources in connection with housing prices rents and supply, it may be necessary to introduce a survey component into the study if data is to be collected at a 'community' level. This could involve interviews with provincial and municipal officials, real estate boards, agents and other community personnel. The purpose of this exercise would be to develop a standardized format that could be used on an annual basis. Depending on our finalized study requirements, it may be possible to arrange a regular survey in conjunction with both SHC and Industry and Commerce data needs.

Other possible sources of data, not yet thoroughly investigated, include the following:

- i) Financial lending agencies for mortgage rates.
- ii) Revenue Canada for income data
- iii) Department of Manpower and Immigration for labour migration data.
- iv) Provincial and Municipal utility agencies for facilities data.
- v) NIP & RRAP sources for housing stock condition and rehabilitation data (IUS previously established contacts valuable in this regard)
- vi) Provincial & Municipal development approval agencies for new and planned construction.
- vii) Municipal Departments for specialized studies of particular areas (e.g. Regina Housing Needs Study)
- viii) Financial lending agencies for mortgage rates.

As discussed earlier in this submission, one of the first tasks facing the study team and the study sponsor will be finalizing the variables and sources. At that time detailed investigations will be made with all the above mentioned sources. Also, it is the consultant's intent to survey all other government agencies in this regard. Costs associated with the gathering and organization of data from these various sources are accounted for in the Research Assistant salary allocation.

SECTION III

DATABASE MANAGEMENT AND UPDATING

SECTION III

DATABASE MANAGEMENT AND UPDATING

3-1 INTRODUCTION

While the overall study objective is to develop a computerized information base consisting of detailed housing stock and household socio-economic characteristics, consideration must be given in the design of the database, flexible program package and accompanying documentation, to ongoing factors in connection with their use and their accuracy. Such factors would include:

- i) Data Entry and Storage;
- ii) Accessibility, security and ease of use;
- iii) Costs of maintenance and use;
- iv) U ate capabilities and procedures;
- v) Database generator and control.

3-2 DATA ENTRY AND STORAGE

Although the initial generation of the database will be provided by this study, maintenance and utilization of the database will require that a minimum level of hardware, software and technical support resources be available to the user(s). This study will provide guidelines for the establishment of this minimum level and will provide procedures for data entry and storage which will make effective use of these resources.

3-3 ACCESSIBILITY, SECURITY AND EASE OF USE

The frequency of user access to the database and the requirements, for rapid retrieval of information from it will likely not be high. Accordingly, the design of the database and access programs which will likely be for off-line made operation and will be designed to produce printed reports of data elements and accumulations.

The study will recommend security measures which will ensure that access to the database will be restricted to specified users and which will provide recovery capability in the event of database integrity failure or accidental erasure.

The ease with which a technically unsophisticated user may have access to the database, and extract selected information will be given high priority in this study. A detailed users manual which describes the capabilities of the flexible program package will be provided.

3-4 COSTS OF MAINTENANCE & USE

The costs of maintenance and use of such a large database are likely to be high. For assessment data alone, an annual update of the database to include new assessment records and reassessment records would likely require input of some 30,000 records, together with deletion of a roughly equivalent number. Careful attention must be given to the design of the database and flexible program package in order to achieve cost effective maintenance and use. A cost-reduction mechanism which will be investigated is the possibility of using programatically-projected database elements where annual survey data is not available and /or the cost of data collection and entry would be prohibitive.

The consultant would be prepared to offer 500 man hours during the summers of 1979 and 1980 in connection with this task. The estimated cost of the latter has been included in the study submission cost estimate.

In addition to this support, this study team will provide a comprehensive handbook which will describe step-by-step procedures for annually updating the database.

3-6 GENERATION CONTROL

Annual update of the database should be accompanied by storage of the previous generation of data, where the files are appropriately labelled by generation number. This method of "history" maintenance has several advantages - principally in relation to accurate projections of data elements, as time-series analysis may be accomplished by use of data from several generations of the database. Also, areas of rapid change in population and demand and need for housing, together with changes in housing stock and affordability may be ascertained and projected with an improved degree of accuracy. This study would provide a methodology for generation control of the database and for comparisons of accumulated database generations.

SECTION IV

ESTIMATION & PROJECTIONS OF HOUSING REQUIREMENTS

SECTION IV

ESTIMATION AND PROJECTIONS OF HOUSING REQUIREMENTS

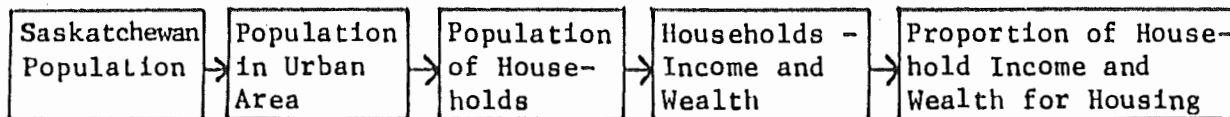
Use of the database information to estimate both current and future housing requirements is an immediate objective of this study. However, it must be borne in mind by the sponsors that the costs of obtaining and inputting to the database accurate and timely information from a variety of sources will consume the major portion of the available financial resources.

Also, the level of complexity which may be achieved in the development of a methodology for estimating current and future housing requirements will depend not only on the resources available to the study team for this part of the study, but on the resources available to the sponsors to implement this methodology on an ongoing basis. Some compromise will be necessary between the sophistication of the methodology to be used and the costs of its development and use. It is suggested that this crucial issue would be the subject of discussions at an early stage in the study between the study team and the sponsors. At these discussions the relationship between the objectives of the study and desired policy goals could be explored.

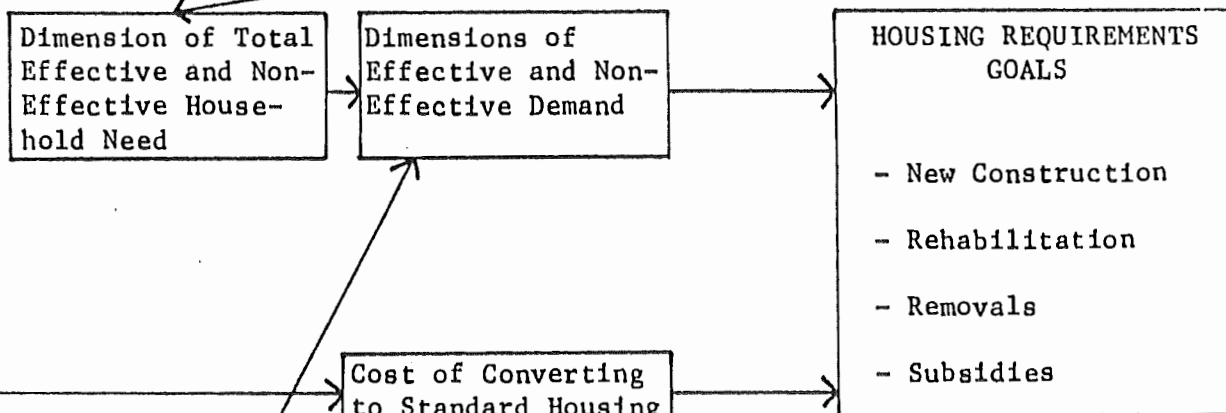
The definitions of housing requirements and needs contained in the study terms of reference contain an implicit normative judgment of minimum acceptable housing conditions for the population as a whole. While this minimum may be a goal of housing policy formulation, it must be recognized that any estimate of current housing needs and requirements will reflect this judgment, and that any projection of

A MODEL FOR ESTIMATING HOUSING REQUIREMENTS

HOUSEHOLD ANALYSIS



HOUSING GOALS



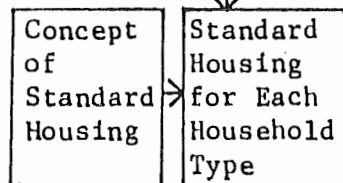
HOUSING ANALYSIS

Cost

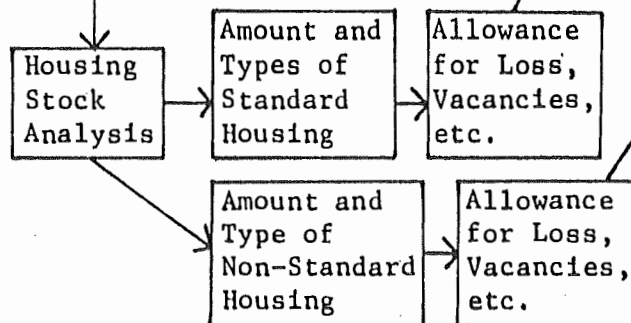
Cost of Standard Housing

Cost of Converting to Standard Housing

Standards



Stock



SOURCE: Armitage, A. and Audain, M. (1972) Housing Requirements: A Review of Recent Canadian Research. Ottawa: Council on Social Development.

future needs and requirements will necessarily hold this factor constant over the period of the projection. It is suggested that this matter also be a subject of discussion between the team and the sponsors.

Within the context of the above limitations, this study will provide the capability of estimating current (i.e. at some point in time) housing needs and requirements and of projecting future needs and requirements. The former will estimate the accumulated need of the population and the latter will estimate both accumulated need and recurrent increments.

A model for estimating housing requirements is included herein. The components of this model closely match those of the study terms of reference in that they include the elements of an analysis of household information, housing stock information, housing cost and affordability information and the implicit normative judgement of minimal acceptable housing conditions. It is anticipated that the study team will use this model to estimate both current and projected housing requirements. This model is a static one and would provide an estimate of current and anticipated housing needs for a selected geographical region of the province. The further breakdown of aggregate housing need into effective and non-effective housing need (differentiated on the basis of ability to pay for adequate housing) is of particular importance to policy formulation by such public sector agencies as CMHC and SHC. Breakdown of total housing needs by these segments, together with an estimate of the relative magnitude of housing requirements by geographical area would allow a prioritizing of policy alternatives.

A review of the alternatives for a methodology of estimating and projecting housing requirements has been conducted by the study team. These alternatives took into account budgetary limitations for this part of the study. Indeed, a commitment to accomplish this task is made contingent upon completion of the task of data collection and entry within the budgeted estimate.

The alternatives for estimation of current housing needs and requirements are twofold:

- i) Using a manual methodology based upon extracted database information.
- ii) Using a computerized methodology whereby the programs contain in their logic the essentials of the model used in the study.

The ease of use of a computerized methodology and the ability of a generalized program to generate housing need information quality and at relatively low cost, favours its use. This study would provide such a program as part of the "flexible program package".

The alternatives for projection of the data and of future housing needs and requirements include:

- i) A dynamic computer model which both projects existing database information, and allows the user of the model to vary the inputs as desired.
- ii) A static computer model which would utilize inputted projection data and fixed relationships between existing variables in the housing model.
- iii) A manual methodology which would be developed by the study team and described in a step-by-step procedure for use by the sponsors.

The costs and difficulty of developing a dynamic computer model of the housing market of an entire province are entirely prohibitive. It was therefore not considered an alternative for this study. Similarly the high costs involved in the development of a static model together with the necessity to utilize fixed relationships between model variables rendered this alternative infeasible. A manual methodology, whose sophistication and level of detail would be agreed upon between the sponsors and the study team would be both feasible and within available resources. Several such methodologies have been published and the staff of the Institute of Urban Studies are familiar with their content and theme.

SECTION V

PRINCIPAL INVESTIGATORS AND SCHEDULING OF REQUIRED TASKS

SCHEDULING OF REQUIRED TASKS

It is envisaged that the anticipated time frame for the study would be 11 months, beginning mid February 1978 and ending mid January, 1979. Set out on Table 1 is a list of required tasks, their scheduling and an indication of personnel responsibilities.

TABLE 1 SUMMARY AND SCHEDULING

<u>TASK</u>	<u>TIMING</u>	<u>RESPONSIBILITY</u>
1. Joint meetings with Regional Co-ordinating Committee to finalize terms of reference, methodology, and arrange co-operation with relevant Departments and Organizations	February, 1978	Senior I.U.S. Staff Project Director
2. Relating variables to policy questions		
3. Write assessment data coding manual		
4. Review of cost estimates for assessment data based on coding manual experience	March	Project Director
5. Develop methodology for collecting non-assessment data components and collect data.	April	Research Director
6. Establish field office and hire field personnel	May	
7. Prepare month end, progress reports (March 78 - Dec. 78)		
8. Design of data-base		
9. Input census data (1971 and 1976) to file (provided available)	May	Project Director
10. Code and keypunch assessment data. Test	June	Research Assistant
11. Code and keypunch non-assessment data. Test	July	Field Manager
12. Input assessment data to file.	August	Summer Assistants
13. Input non-assessment data to file.		
14. Develop flexible computer programs for data input, storage extraction and updating capabilities.	September	Project Director
15. Test and debug programs	October	Research Assistant
16. Write users manual and documentation for 14.		
17. Develop methodology framework and program for projection and analysis capabilities	November	Project Director
18. Write documentation for 17 above	December	Senior I.U.S. Staff
19. Write report of findings/conclusions/policy implications	January, 1979	Research Assistant

PRINCIPAL INVESTIGATORSCORE STUDY TEAM

Senior I.U.S. Supervision

Lloyd Axworthy
Director, I.U.S.

Christine McKee
Assistant Director, I.U.S.

Project Director

Eoin Finn

Research Assistant

Jackie DeRoo

Field Manager

To be appointed

Computer Services Advisor

Brian Chalmers
Director, Computer Services
University of Winnipeg

* Curriculum Vitae for principle investigators are presented in
Appendix D.

SECTION VI

SUMMARY: OVERALL BUDGET

SECTION VISUMMARY: OVERALL BUDGETEstimated Duration: 11 months, February 78 to January 79

1. Study Team Salaries

- Project Director (11 months)	\$20,000
- Research Assistant (11 months)	14,800
- Field Manager (4 months)	5,000
- Senior I.U.S. Supervision (400 hours @ \$20.00 an hour)	8,000
- Secretarial assistance (equivalent of 8 months)	6,000
- Staff benefits and employer contributions (5% of salaries)	2,720

2. Costs of data collection

- Preparation of Assessment Data for Computer input (costs to be reviewed by I.U.S. after 3 months)	87,800	(Sec. 2-4-1)
- Census Canada data input (final cost to be based on Statistics Canada invoicing)	2,000	(Sec. 2-4-2)

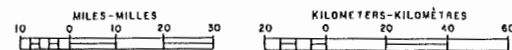
3. Costs of data processing (computer time,
testing of flexible computer program,
program)

2,500

4. Estimation and Projection of Housing Requirements	20,000	(Sec. 4)
5. Updating option (500 hours @ \$8.00 /hr. over 2 yrs.)	4,000	(Sec. 1-3)
6. Printing, photocopying etc.	2,000	
7. Travel	6,000	
8. University overhead (Financial administration/ payment of bills, postage, telephones, university space)	10,000	

TOTAL ESTIMATED COST 190,790

APPENDICES



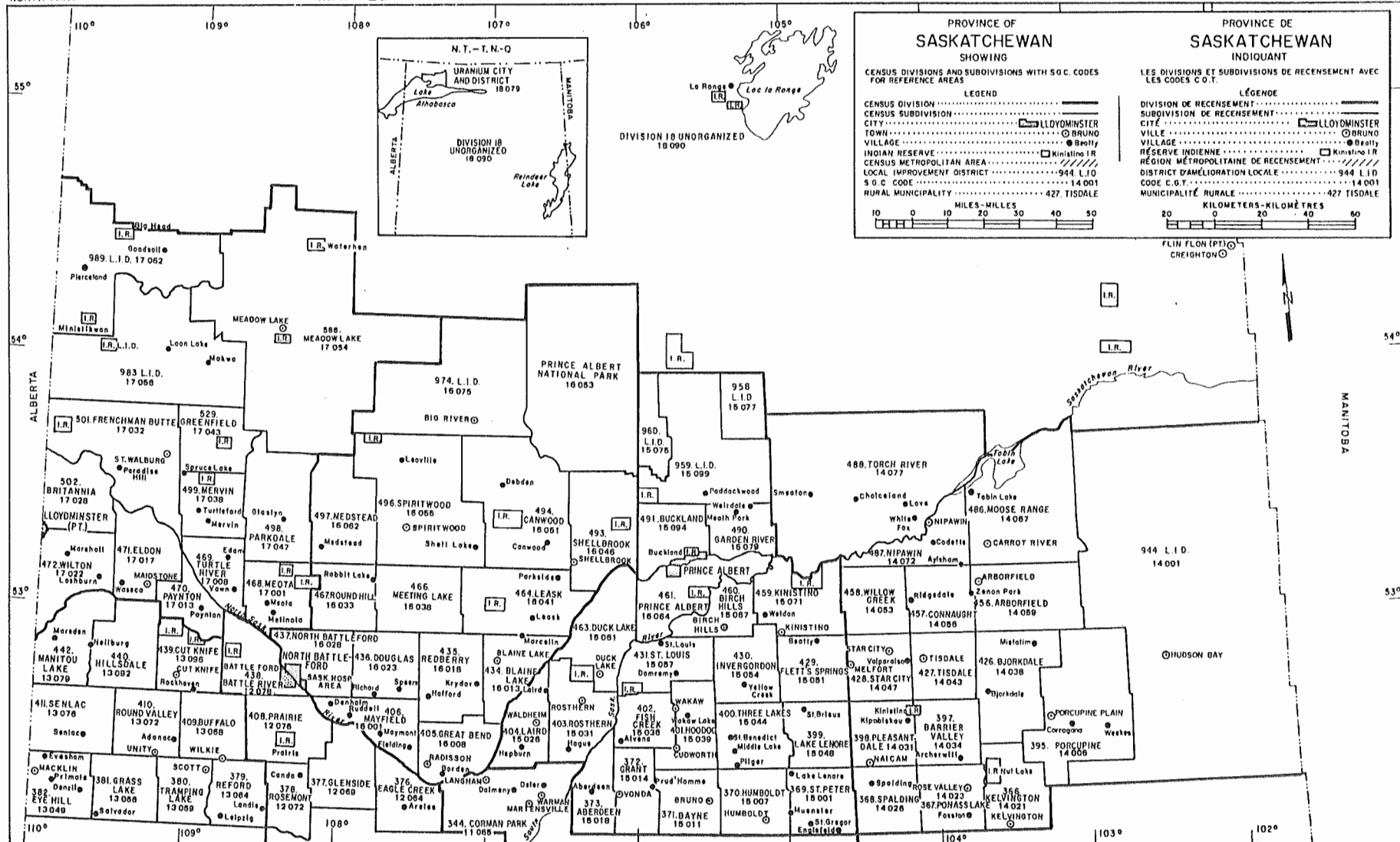
NORTH PART

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PARTIE NORD



STANDARDS DIVISION, STATISTICS CANADA, 1976

DIVISION DES NORMES, STATISTIQUE CANADA, 1976

APPENDIX B

Bibliography - Preliminary Literature Search

- Anthony, J. and Baxter, R. (1971) The First Stage in Disaggregating the Residential Sub-Model. Cambridge: LUBFS
- Apps, P. (1971) A residential Model - Three Demand Equations. Cambridge: LUBFS
- Armitage, A. and Audain, M. (1972) Housing Requirements: A review of Recent Canadian Research. Ottawa: Council on Social Development
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- Barras, R. (1972) Designing Computer Programs for Operational Planning Models. London: Centre for Environmental Studies
- Baxter, R. and Williams, J. (1972) The Second Stage in Disaggregating the Residential Sub-Model. Cambridge: LUBFS
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- Berridge, J.D. (1971) The Housing Market and Urban Residential Structure: A Review. Toronto: Centre for Urban and Community Studies.
- Biernacki, C.M. (1976) Housing Stock Trends. Toronto: Centre for Urban and Community Studies
- Block, A. (1946) Estimating Housing Needs. London: The Architectural Press
- Cherry, G. et al (1975) The Cheltenham Housing Study. Birmingham: Centre for Urban and Regional Studies
- de Leeuw, F. et al (1977) The Web of Urban Housing. Washington: The Urban Institute
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- Henry, L. (1976) Population - Analysis and Methods. New York: Academic Press
- Kilbridge, M.D., O'Block, R.P. and Teplitz, P.V. (1970) Urban Analysis. Boston: Graduate School of Business Administration
- Kirwan, R.M. and Martin, D.B. (1970) The Economic Basis for Models of the Housing Market. Cambridge: Centre for Environmental Studies

- Marks, E.S., Seltger, W., and Krotki, K.J. (1974) Population Growth Estimation. New York: The Population Council
- Methods of Measuring Internal Migration Manual VI. (1970) New York: United Nation
- Mogridge, M.J.H. (1972) The Forecasting of Consumer Income Distribution London: Centre for Environmental Studies
- Morrison, P.A. (1971) Demographic Information for Cities: A Manual for Estimating and Projecting Local Population Characteristics. Santa Monica California: Rand
- Nader, G.A. and Watkins, R.C. (1976) The Delineation of Planning Regions: A Case Study of the Province of Saskatchewan, Plan Canada 16/1 March, 1976. Kingston: Canadian Institute of Planners
- Perraton, J. (1970) Urban Systems: Collection and Management of Data for a Complex Model. Cambridge: LUBFS
- Planning Staff (1960) Central Toronto Housing Study. Toronto: Metropolitan Toronto Planning Board
- Planning Staff (1959) Housing Survey Report - Regina. Regina: Regina Town Planning Department
- Planning Staff (1970) London's Housing Needs to 1974. London: Ministry of Local Government
- Planning Staff (1977) New Directions in Housing. Toronto: City of Toronto Housing Department
- Planning Staff (1976) Victoria Metropolitan Area Housing Study Phase I. Victoria: Capital Regional District Planning Department
- Simmons, J.W. (1977) Migration and the Canadian Urban System: Part I Spatial Patterns. Toronto: Centre for Urban and Community Studies
- Watson, C.J. et al (1973) Estimating Local Housing Needs: A case Study and Discussions of Methods. Birmingham: Centre for Urban and Regional Studies
- Whitehead, C.M.E. (1974) The UK Housing Market. Hants.: Saxon House
- Willis, J. (1972) Design Issues for Urban and Regional Information Systems. London: Centre for Environmental Studies
- Wilson, A.G. (1970) On Some Problems in Urban and Regional Modelling. London: Centre for Environmental Studies

APPENDIX C
CONTACTS MADE DURING PREPARATION OF SUBMISSION

<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
Christine Rump	Regional Co-ordinator Planning & Research	C.M.H.C. Saskatchewan Regional Office - Regina
Steve Hall	Regional Economist	C.M.H.C. - Saskatchewan Regional Office - Regina
Tom Carter	Director of Research	Saskatchewan Housing Corporation, Regina
Nick Rudrick	Assistant Director Assessment Division	Department of Municipal Affairs, Regina
Craig McCullough	Director Statistics	Saskatchewan Hospital Services Plan, Regina
Kavin Taylor	Project Leader	Department of Government Services Systems Centre Branch
Mr. R. McMahon	Director	Saskatchewan Bureau of Statistics, Regina
Neil Southam	Co-ordinator of Institutional Research	University of Regina, Regina
Scotty Livingstone	Director	Regina Real Estate Association, Regina
Rim Shepetys	Director	Royal Trust - Real Estate Div. Regina
Doug Strange	Director	Canadian Real Estate Association, Toronto
Mr. V. Kawka		Population Estimates and Projection Division, Statistics Canada, Ottawa

cont'd

Name

Position

Organization

J. Reed

Census Inquiry Officer

User Inquiry Service
Statistics Canada,
Ottawa

Mr. Rhoades

Current Economic Analysis
Division (CANSIM)
Census Canada, Ottawa

Contacts established during NIP-RRAP Saskatchewan Evaluation,
June to November, 1976:

C.M.H.C.

Jim Lynch	Asst. Mgr.	Saskatoon
Christine Rump	Prog. Co-ord.	Regina
Marilyn Williams	Admin.	Regina
Roy Nichol	Asst. Mgr.	Regina
Bud Lebresh	Admin.	Saskatoon
Gary Sykes	Prog. Mgr.	Regina
Larry Schultz	Admin.	Regina
Everet Dunham	Admin.	Saskatoon

Govt. of Sask.

Gordon Braun	Municipal Affairs
Kevin Hayes	Municipal Affairs
Alec Fowley	Sask. Housing Corporation
George Kroiter	Sask. Housing Corporation
Stan Wilcox	Sask. Housing Corporation

Urban/Rural Municipalities

Gayle Walmeyer	Mayor	Estevan
Ida Peterson	former - Mayor	Estevan
Ron Clark	Director of Planning	Regina
Alec Billy	Mayor	Canora
Michael Kozoriz	Town Clerk	Canora
Marcel Hoste	Town Clerk	Estevan
George Baker	Mayor	Regina
Evelyn Neufeld	Town Clerk	Martensville
Bob Lenner	City Commissioner	Prince Albert
Doug Charet	Director of Planning	Prince Albert
M. Pereverzoff	Mayor	Prince Albert
Cliff Friesen	Town Clerk	Wakaw
Brenda Wilson	Town Clerk	Carlyle
Sally Fleck	Twon Clerk	Lampman

APPENDIX D

CURRICULUM VITAE

CURRICULUM VITAE

Lloyd Axworthy
Director
Institute of Urban Studies
University of Winnipeg
Winnipeg, Manitoba R3B 2E9

Telephone: (204) 772-4658

Date of Birth: December 21, 1939

Education:

Attended the Winnipeg public school system. Graduated in 1961 with a B.A. from United College (now the University of Winnipeg). Attained his M.A. in Political Science from Princeton University in 1963, and completed his Ph.D. from Princeton in the spring of 1972.

Awards:

University of Manitoba Silver Medal in Arts and Science, 1961.
Woodrow Wilson Fellowship.
Woodrow Wilson Doctoral Fellowship.
Awarded the "Outstanding Young Man of the Year" award (1969) by the Winnipeg Jaycees.

Professional and Public Activities:

While in the United States, was active in civil rights movements and participated in early community action programs in New Jersey.

Professor of Political Science at the University of Winnipeg
1965-1967 and 1969 to present.

Was appointed Special Assistant to the Honourable John Turner in 1967, assisted in the development of the Department of Consumer and Corporate Affairs, and was chief policy organizer and speech writer for John Turner in his leadership campaign for the Liberal Party.

Appointed Executive Assistant for Housing and Urban Development to the Honourable Paul Hellyer and was assigned to the Housing Task Force.

Following the Task Force, helped in the preparation of new housing legislation and new housing programs.

Professional and Public Activities (Cont'd.)

Appointed Director of the Institute of Urban Studies, University of Winnipeg, July 1969. This is an urban research centre aimed at developing practical, applied research programs for the solution of urban problems encountered by government and business in their work.

Elected as a Liberal Member of the Legislative Assembly of Manitoba, representing the Fort Rouge Constituency, June 1973.

Appointments:

Member of the Council of the Company of Young Canadians, 1969-1971.

Member of Board of Directors, Neighbourhood Service Centres, 1970-1973.

Advisory Group, Ryerson Polytechnical Institute.

Member of Senate, University of Winnipeg.

Advisory Panel, Woodrow Wilson National Fellowship Foundation.

Advisory Committee, Young Women's Christian Association.

Board of Directors, Alcoholic Family Service Center.

Council Member, Canadian Council on Urban and Regional Research.

Member of Housing Committee, Canadian Council on Social Development.

Chairman, Manitoba Environmental Council, 1972-1973.

Member of National Committee on Human Settlements, responsible for Canadian Participation and activities at the United Nations Conference, "Habitat", Vancouver, 1976.

Member of Advisory Committee on an Urban Governance Project at the Institute for Research on Public Policy, Montreal, 1977.

Publications:

Essay, "The Politics of Urban Innovation," in Living in the Seventies by Allen M. Linden. Toronto: Peter Martin Associates Limited, 1970.

Essay, "The Housing Task Force: A Case Study," in Structures of Policy Making in Canada, G. Bruce Doern and Peter Aucoin, editors. Toronto: The Macmillan Company of Canada Limited, 1971.

Primary author of a Report to the Metropolitan Corporation of Greater Winnipeg entitled "The Structure and Organization of Urban Development Corporations," Winnipeg: Institute of Urban Studies, U of W, 1970.

Publications (Cont'd.)

Editor, The Future City - A Selection of Views on the Reorganization of Government in Greater Winnipeg. Winnipeg: Institute of Urban Studies, U of W, 1971.

Editor, The Citizen and Urban Renewal - A Selection of Working Papers on Planning With People in the Inner City. Winnipeg: Institute of Urban Studies, U of W, 1972.

Co-editor, with James Gillies: The Canadian City: Problems and Prospects. Toronto: Butterworth and Company (Canada) Limited, 1973.

Co-author, with James Cassidy: Unicity: The Transition Years. Winnipeg: Institute of Urban Studies, U of W, 1973.

Co-author, with Pat Christie: Winnipeg's Core Area: An Assessment of Conditions Affecting Law Enforcement. Winnipeg: IUS, U of W, 1975.

Co-author, with Christine McKee: Winnipeg's Meals on Wheels, a program evaluation and examination of alternative models of operation. Winnipeg: Institute of Urban Studies, U of W, 1975.

Essay, "A Test for Institutional Innovation: Winnipeg's Unicity," to appear in forthcoming book on local government edited by Donald Rowat of Carlton University, Ottawa.

Essay, on Unicity to appear in forthcoming book on urban problems, edited by Stan Drabek of the University of Calgary.

Essay, on "Politics of Urban Populism" to appear in forthcoming book on emergent patterns in the Canadian planning mosaic, prepared by Dr. William Perks and Dr. Ira Robinson, Faculty of Environmental Design, University of Calgary.

Series of articles in the Winnipeg Free Press dealing with current topics in the field of housing: "The End of Rental Housing," "The Prospect of Rent Control," "The Planning Dilemma," and "A City in the Housing Business: The Case of Toronto," August-September, 1975; has published numerous articles in periodicals including Community Planning Association Review, The Journal of Liberal Thought, ANSUL, Canadian Welfare, Canadian Forum, PLAN, Canadian Issues, and others.

Has presented papers to the Canadian Association for Social Studies Annual Convention; the 42nd Annual Meeting of the Canadian Political Science Association; the Canadian Association of Real Estate Boards; The Canadian Studies Association; the CULF Conference; The Ditchley Conference in Oxford, England on implications of increase in leisure time, entitled: Community Employment and Urban Problems; Victoria Housing Conference; to members of the Social Sciences, Economic and Legal Aspects Committee of the International Joint Commission Research Advisory Board, Ann Arbor, Michigan on Environmental Protection on the International Level, entitled: Reflections on the Garrison Diversion Project; at the Community Planning Association of Canada Housing Conference in Saskatoon, entitled: Examination of Factors Affecting Housing Availability - A Critical Analysis; the National Social Science Conference, Ottawa, entitled: Social Science and Public Policy.

As well, is frequently asked to speak to a wide variety of associations and organizations in Winnipeg and often represents the Institute at local, national and international conferences relating to urban topics

January, 1977.

CURRICULUM VITAE

Name: Christine Diane McKee (Mrs.)

Date of Birth: July 17, 1941

EDUCATION

1952-59 Educated at Sheffield High School for Girls (scholarship entrant) gaining General Certificate of Education, Ordinary level in 8 subjects in 1957 and General Certificate of Education, Advanced level in 3 subjects in 1959.

1959-62 Student of Social Science, Department of Social Administration, University of Birmingham, England.

1962 Graduated, gaining degree of Bachelor of Social Science with second class honours.

WORK EXPERIENCE

1962-67 Intermittent part-time teaching appointments while bringing up family (children now 11 and 14).

1967-69 Sessional lecturer in Liberal Studies to Higher National Diploma students, Birmingham Polytechnic.

1968-70 Sessional lecturer in British Government and English Language and Literature to General Certificate of Education candidates, Bournville College of Further Education.

1969-71 Research Associate, Institute of Local Government Studies, University of Birmingham.

Worked on a study financed by the Ministry of Housing and Local Government which examined the process of local government reorganization in the West Midlands and Teesside and Torbay.

1971-73

Research Associate, Department of Social Administration,
University of Birmingham.

Designed and organized a study which examined the functions and organizational characteristics of charitable and voluntary organizations in Birmingham. During this time undertook some teaching of Social Policy to first and third year undergraduates.

1973-1974

Senior Research Associate and Seminar Organizer, Centre for Urban and Regional Studies, University of Birmingham.

This job involved examining the relationship between social research and social policy, particularly the extent to which social research could be useful in solving policy problems experienced by local authorities.

It also involved organizing post-experience courses and seminars for local government officers and some teaching of post-graduate students.

1975-1976

Research Officer, Institute of Urban Studies, University of Winnipeg.

1976 -

Assistant Director, Institute of Urban Studies, University of Winnipeg.

Since joining the Institute work undertaken has included:

- The preparation of draft material for a publication on the housing and related conditions and preferences of older persons in Winnipeg.
- Evaluation of the Winnipeg Meals on Wheels Service and Information and Resource Centres operated by the Children's Aid Society.
- Providing assistance in developing a methodology for monitoring and evaluating social housing programs.
- Analysis of Winnipeg inner city conditions and the implications of public policies related to the inner city.
- The organization of conferences on Urban Growth and Innovative Strategies for the Renewal of Older Neighbourhoods.
- Direction and co-ordination of social housing management training programs offered by the Institute.

- Joint responsibility with the Director for the Organization and curriculum development of the Urban Workshop, a third level undergraduate course and one of the core courses of the Urban Studies program.

OTHER OFFICES HELD

1975 - Board member, Winnipeg Home Improvement Project, an employment training program, providing amongst other services, rehabilitation of older homes in the inner city area.

1976 - Board Chairman WHIP.

1977 - Board member, Winnipeg Art Gallery.

PUBLICATIONS

1. Setting Up the New Authorities
Dr. J. Long and A.L. Morton,
Chas. Knight 1973

(Assistance given with research design,
collection of information
and writing up of research project
on which this book is based)
2. Problems of Reorganization
for Public Health Department
C. McKee
Environmental Health, August, 1972
Vol. 80, no. 8.
3. Facing Up to
Reorganization
C. McKee with Ray Puffett
Municipal Engineering, May 25, 1973
Vol. 150, No. 4.
4. Perspectives on Charities
C. McKee
Social Service Quarterly, Spring, 1973
Vol. XLVI, No. 4
5. Birmingham Charities Survey
C. McKee
Report to General Purposes Committee,
Birmingham City Council, Dec. 1973.
6. Charitable Organizations
C. McKee
Centre for Urban and Regional Studies,
(Special Series), Sept. 1974.
7. Perspectives on Planning,
Employment and Industrial
Location
ed. C. McKee
Working Paper No. 20. Centre for
Urban and Regional Studies, Dec. 1973.
8. The Role of the
Comprehensive Housing
Service in Relieving
and Preventing Homelessness
ed. C. McKee
Working Paper no. 21. Centre for
Urban and Regional Studies, Feb. 1974.
9. Social Aspects of
Local Planning
ed. C. McKee
Working Paper No. 22. Centre for
Urban and Regional Studies, July, 1974.

Publications 7, 8, and 9 record the proceedings of day seminars.

- | | |
|---|--|
| 10. Winnipeg Meals on Wheels Service: A Program Evaluation and Examination of Alternative Models of Operation | C. McKee with Lloyd Axworthy, Institute of Urban Studies, September, 1975. |
| 11. Evaluation Report, Social Housing Management Course | C. McKee, Institute of Urban Studies, June, 1976. |
| 12. Information and Resource Centre Evaluation | C. McKee, assisted by Joyce Epstein, Institute of Urban Studies, November, 1976. |
| 13. Retirement Housing in Urban Neighbourhoods: Some Inner City Options. | Don Epstein, Institute of Urban Studies, July, 1976.
(Preparation of Preliminary draft of the survey findings on which this publication is based) |
| 14. Non-profit Housing | Gene Milgram, Christine McKee and Lloyd Axworthy. <u>Canadian Consumer</u> , February, 1977. |

FORTHCOMING PUBLICATIONS

- | | |
|--|--|
| - Innovative Strategies for the Renewal of Older Neighbourhoods (A collection of Seminar papers) | ed. Christine McKee, Institute of Urban Studies, October 1977 |
| - Inner City Profiles and Processes of Change. | Joyce Epstein and Christine McKee, in Innovative Strategies for the Renewal of Older Neighbourhoods, Institute of Urban Studies, October 1977. |
| - Handbook for Social Housing Managers | Claudia Engel, Christine McKee, Tom McCormack and Gene Milgram, Institute of Urban Studies, November 1977. |
| - Social Housing Management Training - Case Studies and Class Techniques | Christine McKee, Institute of Urban Studies, Spring, 1978. |

Eoin Finn, B.Sc., Ph.D., M.B.A.

PRESENT
EMPLOYER &
EXPERIENCE: BURROUGHS BUSINESS MACHINES LTD., Winnipeg, Manitoba.
Job Title: Management Systems Analyst. From: Sept/76 To: present
Duties and Responsibilities:
•Design, programming and implementation of materials and financial information systems for Burroughs' Canadian engineering and manufacturing operations.
•Introduction and troubleshooting of new systems for the Winnipeg plant start-up.
•Instruction and co-ordination of personnel in the use of database applications and systems utilizing a B6700 large computer facility.
•Responsibility for the maintenance of a large DMS database package.
•Introduction of an on-line capability-hardware and software planning and implementation.

ADDITIONAL
EXPERIENCE &
INFORMATION
•5 years experience with IBM 360/370 and CDC 6400 computers with both scientific and business applications.
•Extensive knowledge of FORTRAN IV and AIGOL computer languages.
•Good working knowledge of BASIC, COBOL and PL/1 languages.
•Proven analytical and communication abilities.
•'Self-starter', capable of working with minimal supervision.

PREVIOUS
EMPLOYERS: WESTINGHOUSE CANADA LTD. - Special project: Development of an export marketing program to S. Africa, 1976.

McMASTER UNIVERSITY, School of Business - Teaching Assistantship: The Use of Information Systems in Managerial Decision Making, 1975-76.

CANADIAN VEGETABLE OIL COMPANY - Product quality control and co-ordination of laboratory procedures, 1975.

EDUCATION: R.I.A. (4th year - part time study).

M.B.A., 1976 - McMaster University, Hamilton, Ontario.

Ph.D., Physical Chemistry, 1973 - McMaster University.

B.Sc. (Hons), Chemistry, 1967 - National University of Ireland.

INTERESTS: Golf, tennis, mountain sports, sailing, photography.

PERSONAL: Born 46/10/31, Ireland
Status: Married, no children
Citizenship: Canadian and Irish
References and transcripts on request

JACKIE DEROO (MS.) B.A.

EDUCATION: B.A. (Hons.) Geography, 1971.
Major: Urban Geography and Planning
From: McMaster University, Hamilton, Ontario

EMPLOYMENT HISTORY: Summer, 1969 Government of Ontario
Department of Lands and Forests
Member of Northern Ontario field
team for Canada Land Inventory.

Summer, 1970 Canada Centre for Inland Waters
Federal Government Department of
Energy, Mines and Resources
Research Geographer: Prepared
detailed economic water and land
use map for the Great Lakes drainage
basin - distributed nationally by
Federal Government.

1971 - 1973 Philips Planning and Engineering
(Canada), Consulting Engineers and
Planners
Planner: Co-ordinated a four-
company consultant team working on
the background research studies and
long range development policies for
Ontario's Regional Municipality of
Niagara. Worked on a local govern-
ment reorganization study for
Ontario's Regional Municipality of
Hamilton-Wentworth.

1973 - 1974 Murray, Murray, Pettit and Partners
(Ireland), Architects and Town
Planners
Planner: Member of a study team
working on an overall development
plan for Limerick City (Ireland)
including four detailed Neighbour-
hood Plans.

1974 - 1976 The Planistics Group (Canada)
Consulting Town Planners
Senior Planner: Assistant Project
Director for the Town of Ancaster's
Official Plan program - including
the preparation of numerous research
reports, briefs, development policies,
bylaws, etc.

Worked in numerous private and public
planning policy and design contracts
predominantly in Southern Ontario.

1977

Institute of Urban Studies (Canada)
University of Winnipeg

Research Officer: Since joining
the Institute work has included-

- A Community School Evaluation Study
in Winnipeg (in progress)
- Review and Evaluation of Integrated
Housing projects in Canada (in
progress)
- Seminar teaching responsibilities
relating to 3rd level urban work-
shop course.

LIST OF PUBLICATIONS:

1. Research Report: Community Facilities

prepared for the Regional Municipality of Niagara, St. Catharines,
Ontario, by Philips Planning and Engineering, Burlington, Ontario,
1972.

2. Research Report: Land Use

prepared for the Regional Municipality of Niagara, St. Catharines,
Ontario, by Philips Planning and Engineering, Burlington, Ontario,
1972.

3. Research Report: Environment

prepared for the Regional Municipality of Niagara, St. Catharines,
Ontario, by Philips Planning and Engineering, Burlington, Ontario,
1972.

4. Draft Official Plan: Regional Niagara

prepared for the Regional Municipality of Niagara, St. Catharines,
Ontario, by Philips Planning and Engineering, Burlington, Ontario,
1973.

5. Limerick Environs Development Plan - Main Report

prepared for Limerick County Council by Murray, Murray, Pettit
and Partners, Ireland, August, 1974.

6. Limerick Environs Development Plan - Dooradoyle District Plan,
Castletroy District Plan, Caherdavin District Plan, Gouldavoher
District Plan

prepared for Limerick County Council by Murray, Murray, Pettit
and Partners, Ireland, 1974.

7. Town of Ancaster Official Plan Program

List of Working Papers:

1. Sign Guidelines - Village Area, 1975
2. Interim Development Policy, 1975
3. Neighbourhood Boundaries, Existing Urban Area Criteria and Rationale, 1975
4. Interim Noise Control Policies: Highway 403 & New Residential Development, 1975
5. Public Participation Programme
 - Report 1: Planning Background Discussion Paper, 1975
 - Report 2: Review of 1st Series of Discussion Meetings, 1975
 - Report 3: Alternative Development Concepts, 1976
 - Report 4: Review of 2nd Series of Discussion Meetings, 1976
6. A Concept for Evaluation: A Business/Industrial Park, 1976
7. A Sign By-Law for a Defined Area Within the Town of Ancaster, 1976
8. Interim Consents Policies, 1976
9. Medium Density Residential Development: Development Criteria and Design Standards, 1976.

CURRICULUM VITAE

Name: Margaret Anne Egan

Date of Birth: October 1951

EDUCATION

1963 - 1969	Educated at St. Mary's Academy, Winnipeg, gaining High School Diploma (University Entrance) in 1969
1969 - 1972	Student in the Faculty of Arts, University of Manitoba, Winnipeg.
1972	Graduated, gaining degree of Bachelor of Arts
1973 - 1974	Student, Master's Program, Department of City Planning, Faculty of Architecture, University of Manitoba, Winnipeg
1975 - 1977	Student, Master's Program, Faculty of Environmental Studies, York University, Toronto
1978	Proposed graduation, Masters of Environmental Studies - January 1978 Major Research: The State of Family Housing in the Core Area of Toronto

WORK EXPERIENCE

1972 - 1973	Research Assistant, Freshwater Institute, Fisheries Research Board of Canada, Winnipeg Worked on studies of environmental pollution especially those dealing with the effects of economic development on the environment of Northern Manitoba
1974 - 1975	Research Assistant, Regional Economics Section, Prairie Regional Office, Central Mortgage and Housing Corporation Winnipeg

1974 - 1975 (cont'd.)

Worked on various studies of housing development in the region

Researched and took part in the production of an in house report entitled "The Need for Subsidized Housing in the Prairies 1975." The report analyzed the performance of CMHC in providing subsidized housing in Manitoba, Saskatchewan and Alberta and targeted areas of possible future activity.

1976 - 1977

Part-time research for Research Section, Research and Overall Planning Division, City of Toronto Planning Board of Toronto.

Studied and analysed Toronto's housing policies especially those dealing with accommodation in the rental sector for families with children.

1977

Research Officer, Institute of Urban Studies
University of Winnipeg

Organizing and producing proposals for possible future projects to be undertaken by the Institute.